



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,424	10/30/2003	Dennis J. Vandenberg	100.405US01	7734
34206	7590	06/23/2006	EXAMINER	
FOGG AND ASSOCIATES, LLC P.O. BOX 581339 MINNEAPOLIS, MN 55458-1339			TRAN, VINCENT HUY	
			ART UNIT	PAPER NUMBER
			2115	

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/697,424

Applicant(s)

VANDENBERG ET AL.

Examiner

Vincent T. Tran

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-20 is/are allowed.
- 6) ☒ Claim(s) 1,2,7,8,10 and 13 is/are rejected.
- 7) ☒ Claim(s) 3-6,11,12 and 14-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Action is responsive to applicant filed on October 30, 2003. Claims 1-20 are pending for examination.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 7-8, 10, 13 are rejected under 35 U.S.C. 102(b) as being Buckenmaier by U.S. Patent 5,857,005.

4. As per claim 1, Buckenmaier discloses a data apparatus that can loaded synchronously and unloaded out-of-phase, the apparatus comprising:

a first data register [212 fig. 2] comprising a data input coupled to a data signal [202 fig. 2], a clock input coupled to a clock signal [204-CP fig. 2], an enable input [SA from R222 fig. 2] coupled to a periodic first load signal, an a data output [Q fig. 2];

a second data register [214 fig. 2] comprising a data input coupled to the data output of the first data register [DA fig. 2], a clock input coupled to the clock signal [CP fig. 2], an enable input coupled to a second load signal [SA from R228 fig. 2], and a data output [210 fig. 2]; and

a controller [219+226 fig. 2] having a clock input [204 fig. 2] coupled to the clock signal, a load data input coupled to the first load signal [D on R222 fig. 2], and a read data input coupled

to a periodic read signal [206 fig. 2], the controller having a capability for generating a first guard band signal [output of R222 to SA on R212 fig. 2] in response to the first load signal and the clock signal and a second guard band signal [output of R218 fig. 2] in response to the read signal and the clock signal, the controller further having a capability for generating the second load signal [output of R228 fig. 2] in response to the first and second guard band signals [col. 4 lines 54-65; col. 5 lines 3-13; col. 6 lines 13-18, 27-41].

5. As per claim 2, Buckenmaier discloses the second load signal is generated by performing a logical AND [220 fig. 2] on the first and second band signals.

6. As per claim 7, Buckenmaier discloses the first data register is a “D” type flip-flop [fig. 2].

7. As per claim 8, Buckenmaier discloses the second data register is a “D” type flip-flop [fig. 2].

8. As per claim 10, Buckenmaier discloses a method for loading a data register apparatus synchronously with a periodic first load signal and unloading the data register apparatus out-of phase with a read signal, the method comprising:

coupling an output of a first data register to an input of a second data register [212-214 fig. 2];

coupling a clock signal to a clock input of each of the first and second data registers [CP on each Register fig. 2];

generating a first guard band signal in response to the clock signal and the first load signal [QN of Register 222 fig. 2];

generating a second guard band signal [PULSE of Register 218 fig. 2] in response to the clock signal and the read signal [col. 5 lines 3-13];

generating a second load signal [output of Register 228 fig. 2] in response to the first and second guard band signal [col. 6 lines 13-41; only when AND gate 202 is active]; and

applying the second load signal to an enable input of the second data register [SA of Register 214 fig. 2].

9. As per claim 13, Buckenmaier discloses generating the second load signal comprise logically ANDing the first and the second guard band signals [220 fig. 2].

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buckenmaier as applied to claim 1 above.

12. As per claim 9, Buckenmaier does not teach the controller is a filed programmable. However, this limitation is well know in the art, therefore it would have obvious to one of ordinary skill in the art the have modified the controller of Buckenmaier with the claimed limitation.

### ***Allowable Subject Matter***

13. Claims 16-20, are allowed.

14. Claim 3-6, 11-12, 14-15, 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

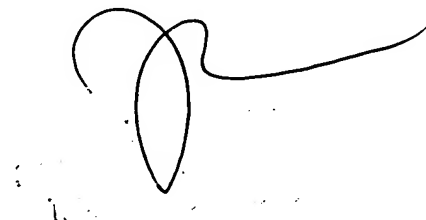
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent T. Tran whose telephone number is (571) 272-7210. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas c. Lee can be reached on (57 1)272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vincent Tran

A handwritten signature in black ink, consisting of a large loop followed by a horizontal stroke extending to the right.